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ABSTRACT

The U.S. farm population continued its long-term downward trend during 1977, indicating that the population growth characteristic of nonmetropolitan counties since 1970 has not extended to population living on farms. In the 12-month period centered on April 1977, the farm population was 7,806,000, or 450,000 fewer farm residents (5.4%) than in 1976 and 1.9 million fewer (19.6%) than in 1970. However, the 3.3% annual rate of net outmigration (average amount of net migration and reclassification as a percentage of average farm population) for 1970-77 was below the 5-6% rates of the fifties and sixties. Among the country's four geographic regions, the South continued to be the heaviest loser; the West has shown some stability in farm population since 1970. In 1977, the North Central states had almost half the total U.S. farm population (46%), followed by the South (34%), West (12%), and Northeast (7%). As to components of farm population change (births, deaths, net change from migration and residence reclassification), in the April 1976-77 period, 27,000 more births than deaths partly offset the total of 474,000 persons lost through migration or reclassification. For the 1970-77 period, average net loss through migration and reclassification to nonfarm was 301,000 annually, with an average of 28,000 more farm births than deaths. (RS)

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FARM POPULATION ESTIMATES FOR 1977

Vera J. Banks

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FARM POPULATION ESTIMATES FOR 1977. By Vera J. Banks, Economic Development Division, Economics, Statistics, and Cooperatives Service, U.S. Department of Agriculture. Rural Development Research Report No. 4.

ABSTRACT

The U.S. farm population was 7,806,000 in the 12-month period centered on April 1977. This was 450,000 (or 5.4 percent) lower than in 1976, and 1.9 million (or 19.6 percent) lower than in 1970. For the period 1970-77, the average net loss of farm population through migration and reclassification of residence from farm to nonfarm was 301,000 annually--an average rate of 3.3 percent. Among the Nation's four regions, the South continued to be the heaviest loser. The West exhibited stability in farm population in contrast to the rest of the country.

Key words: Farm population, Migration, Regional analysis.

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United States Department of Agriculture
Washington, D.C. 20250

September 1978

Farm Population Estimates for 1977

Vera J. Banks *

INTRODUCTION

The U.S. farm population continued a long term downward trend during 1977. Farm population averaged 7,806,000 in the 12-month period centered on April. 1/ This was 450,000 (or 5.4 percent) lower than in 1976, and 1.9 million (or 19.6 percent) lower than in 1970.

Eighty-one percent of the farm population was in nonmetropolitan counties in 1977. The above figures show that the revival of population growth that has been characteristic of nonmetro counties as a whole since 1970 did not extend to the population living on farms. 2/ From 1970 to 1976, nonmetro counties increased in population by 8 percent, while metro counties grew only 4.7 percent. This trend resulted from more people moving into the nonmetropolitan or rural and small town areas of the country than moved away. In earlier periods, there was a net outflow of people from such areas. 3/

Although farm population has continued to decline, it has evidenced a slackening in the rate of loss. The average annual rate of decline was only 3.1 percent between 1970 and 1977, compared with 4.8 percent between 1960 and 1970. A trend of lower farm population loss in the seventies is further supported by an examination of trends in the heavily agricultural counties of the Nation.

Counties with a high proportion of their workers in farming are still vulnerable to population decline and outmigration, but they have shown improved population retention. During 1970-76, counties with 40 percent or more of their workforce employed in agriculture declined by 0.1 percent annually. These same counties experienced an annual loss of 1.4 percent of their population during the 1960's.

The historically downward trend in the number of farm residents, accompanied by steady increases in the number of persons living in nonfarm areas, ha-

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1/ This estimate is an annual average computed by using quarterly data for the year centered on the April date for which the estimate is prepared. In this case, quarterly estimates for October 1976 and January, April, July, and October 1977 were used (see explanations on page 7).

2/ Banks, Vera J., and Diana DeAre. Farm Population of the United States: 1977. Current Population Reports, Farm Population Series P-27, No. 51. U.S. Bur. Census and U.S. Dept. Agr., 1978.

3/ Beale, Calvin L. The Revival of Population Growth in Nonmetropolitan America. ERS-605. Econ. Res. Ser., U.S. Dept. Agr., June 1975; and "A Further Look at Nonmetropolitan Population Growth Since 1970", American Journal of Agricultural Economics., Vol. 58, No. 5, pp. 953-958. Dec. 1976.

resulted in an ever-declining farm share of the U.S. total population. In 1977, 3.6 percent of the Nation's 216 million persons lived on farms, compared with 30 percent of the 106 million total when the farm population was first counted in the 1920 census.

FARM POPULATION CHANGES IN GEOGRAPHIC REGIONS AND DIVISIONS

From 1920 to 1950, there was little change in the regional distribution of the farm population. The South, with somewhat more than half of all farm residents, was the most populous. The North Central region, with slightly less than a third, ranked second. The Northeast and West each had about a twelfth. 4/

Persistently heavier rates of Southern farm population loss from 1950 to 1970, however, resulted in this region containing a declining share of the national total. During this 20-year period, the North Central region experienced lower rates of farm population decline and, thus, increased in relative importance. These regional variations continued during 1970-77, and the North Central States, with 3.6 million of the Nation's 7.8 million farm residents, increased their share to almost half of the U.S. total (table 1). The South, with little more than a third of the total farm population in 1977, ranked second.

Although the Northeast and West continue to have relatively small numbers of farm people, they have exhibited differing population trends since 1970. The Northeast has experienced almost continuous farm population decline, but has nevertheless maintained it's relative share--about 7 percent. On the other hand, the West has shown some stability, if not actual growth, in farm population since 1970. As a consequence, the West's share of the farm total rose from 10 to 12 percent between 1970 and 1977.

Persistent and heavy farm population loss characterize each of the three geographic divisions of the South. Although no particular pattern has been established, each of these three areas exhibited heavier relative loss in the 1950's, 1960's, and 1970's than any of the remaining divisions.

COMPONENTS OF FARM POPULATION CHANGE

Estimates of the components of farm population change--births, deaths, and net change through migration and reclassification of residence--for the April 1976-77 period are presented in table 2. During this 12-month period, there was an estimated net loss to the U.S. farm population of 474,000 persons who either moved away from farms or lived on places where agricultural operations ceased and, thus, were removed from the farm category. This loss was partly offset by an estimated 27,000 more births than deaths among farm people.

Since these estimates fluctuate from year to year, due in part to sampling variation, averages for a period of years are deemed more reliable. For the 1970-77 period, the average net loss to the farm population through migration and reclassification of residence from farm to nonfarm was 301,000 annually (table 3). An average of 28,000 more farm births than deaths partly offset this loss. The smaller absolute average amount of net outmovement for 1970-77 compared with earlier periods reflects the declining farm population from which migrants are drawn. The farm population cannot continue to yield outmigrants in the 1970's at the magnitude it did during the previous three decades (figure 1). If it did, the farm population would rapidly be depleted.

More people are thought to be involved in actual outmovement than in the reclassification of residences from farm to nonfarm, although the exact proportions are unknown. It is possible that an increasing proportion are being reclassified as nonfarm. The expansion in the 1970's of employment opportunities in rural areas and small towns of the country allows more residents of former small-scale farms to remain on their home site, cease farm activities, and commute to nonfarm work. Between 1970 and 1977, the rate of gain in U.S.

4/ Banks, Vera J., and Calvin L. Beale. Farm Population Estimates, 1910-70. SB- 523, U.S. Dept. Agr., July 1973.

Table 1--U.S. farm population by region and division, April 1970 and 1977

Area	Number		Total farm population		Percentage change, 1970-77
	1977 1/	1970	1977 1/	1970	
	-- Thousands --		----- Percent -----		
United States	7,806	9,712	100.0	100.0	-19.6
Region: 2/					
Northeast	561	699	7.2	7.2	-19.8
North Central	3,598	4,305	46.1	44.2	-16.4
South	2,684	3,754	34.4	38.7	-28.5
West	963	954	12.3	9.8	1.0
Division: 2/					
New England	126	128	1.6	1.3	-1.5
Middle Atlantic	434	571	5.6	5.9	-23.9
East North Central	1,652	2,053	21.2	21.1	-19.5
West North Central	1,946	2,252	24.9	23.2	-13.6
South Atlantic	924	1,357	11.8	14.0	-31.9
East South Central	1,007	1,329	12.9	13.7	-24.2
West South Central	753	1,069	9.6	11.0	-29.5
Mountain	410	446	5.3	4.6	-8.1
Pacific	553	508	7.1	5.2	8.9

1/ Similar estimates for States are not available.

2/ States in the geographic regions and divisions are: NORTHEAST--New England: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut; Middle Atlantic: New York, New Jersey, Pennsylvania. NORTH CENTRAL--East North Central: Ohio, Indiana, Illinois, Michigan, Wisconsin; West North Central: Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas. SOUTH--South Atlantic: Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida; East South Central: Kentucky, Tennessee, Alabama, Mississippi; West South Central: Arkansas, Louisiana, Oklahoma, Texas. WEST--Mountain: Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada; Pacific: Washington, Oregon, California, Alaska, Hawaii.

nonfarm wage and salary employment was considerably greater in nonmetro than in metro areas. 5/

The annual rate of net outmigration, in which the average amount of net migration and reclassification is expressed as a percentage of the average farm population, was 3.3 percent for 1970-77. The farm population has not experienced as low a rate of net outmovement in about 30 years (figure 2). In both the 1950's and 1960's, as the absolute average loss began to diminish, the average rate of net outmovement remained between 5 and 6 percent (see figures 1 and 2). However, in the 1970's, both the average number of migrants and the rate at which they moved dropped significantly.

Although the South has declined in relative importance in terms of numbers of farm residents, it continues to be the greatest exporter from the farm population. More than half of the

5/ Haren, Claude C., and Ronald W. Holling. Rural Job Growth in the 1970's. I.D. Note 66. Ext. Ser., U.S. Dept. Agr., Oct. 14, 1977.

Table 2--U.S. farm population and components of farm population change, by region and division, April 1976-77

Area	Farm population, April 1977	Natural increase			Net change through migration and reclassification of residence 1/	Farm population, April 1976
		Total	Births	Deaths		
	Thousands					
United States	7,806	27	107	-79	-474	8,253
Region: 2/						
Northeast	561	1	8	-7	-38	597
North Central	3,598	13	50	-36	-215	3,800
South	2,684	8	35	-28	-179	2,855
West	963	5	14	-9	-42	1,000
Division: 2/						
New England	126	3/	2	-2	-10	137
Middle Atlantic	434	1	6	-5	-27	461
East North Central	1,652	4	21	-17	-108	1,756
West North Central	1,946	9	28	-19	-107	2,044
South Atlantic	924	2	12	-10	-48	970
East South Central	1,007	3	14	-11	-84	1,088
West South Central	753	3	10	-7	-47	797
Mountain	410	3	6	-4	-11	418
Pacific	553	3	8	-5	-31	582

1/ Includes persons who did not move, but who were in or out of the farm population because agricultural operations on the places where they were living either ceased or were begun.

2/ Similar estimates for States are not available. For States included in each region and division, see table 1.

3/ Fewer than 500 people.

Table 3--Annual averages of components of farm population change and rate of net migration, by region and division, April 1970-77

Area	Natural increase			Net change through migration and reclassification of residence 1/	Annual rate of net migration 2/
	Total	Births	Deaths		
	Thousands				Percent
United States	28	120	-91	-301	-3.3
Region: 3/					
Northeast	1	9	-8	-21	-3.2
North Central	13	54	-41	-114	-2.8
South	9	43	-33	-162	-4.9
West	5	14	-9	-3	-.3
Division: 3/					
New England	4/	2	-2	4/	-.2
Middle Atlantic	1	7	-6	-21	-4.0
East North Central	5	24	-19	-62	-3.3
West North Central	9	31	-22	-52	-2.4
South Atlantic	3	15	-12	-65	-5.6
East South Central	3	16	-13	-49	-4.1
West South Central	3	12	-9	-48	-5.2
Mountain	2	7	-4	-8	-1.7
Pacific	2	7	-5	4	.8

1/ Includes persons who did not move, but who were in or out of the farm population because agricultural operations on the places where they were living either ceased or were begun.

2/ Based on annual average net change in population through migration per 100 persons in the average April farm population for the period indicated.

3/ Similar estimates for States are not available. For States included in each region and division, see table 1.

4/ Fewer than 500 people.

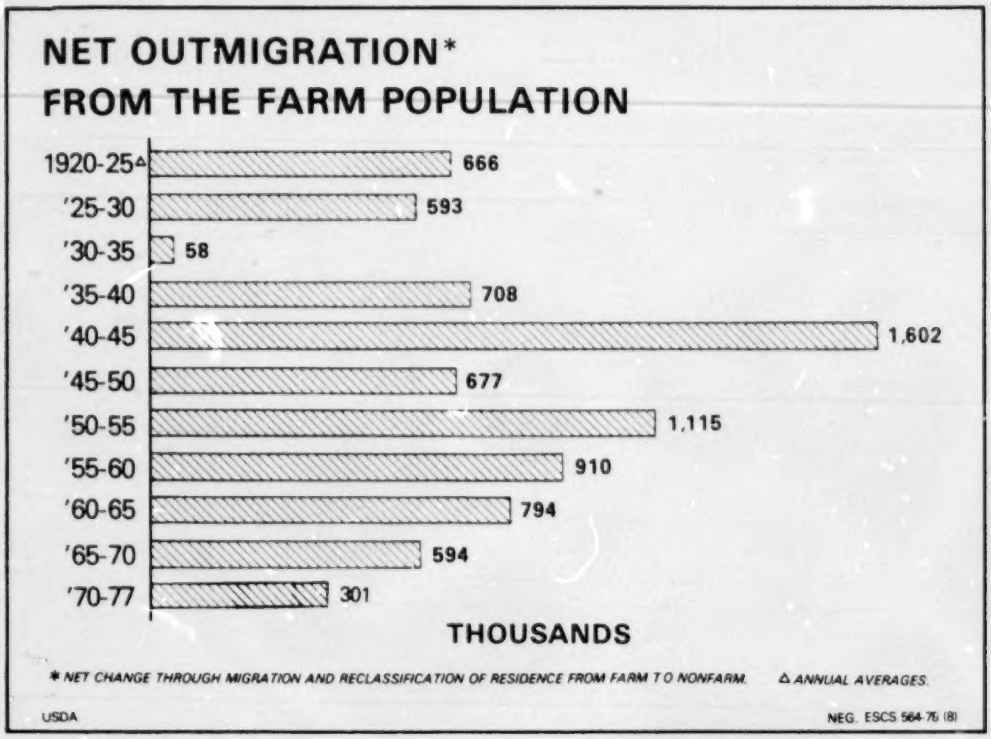

Figure 1

average net loss to the farm population through migration for 1970-77 came from Southern farms.

DEFINITIONS AND EXPLANATIONS

Population coverage. Estimates presented in this report relate to the rural civilian population living on farms, without regard to occupation. For convenience, the term farm population is used without qualification, although the relatively few members of the Armed Forces living on farms are excluded.

Farm population. From April 1960 through August 1975, the farm population was defined as all persons living in rural territory on places of 10 or more acres, if as much as $50 worth of agricultural products were sold from the place in the reporting year. It also includes those living on places of under 10 acres, if as much as $250 worth of agricultural products were sold from the place in the reporting year.

In the Current Population Survey (CPS) of the Bureau of the Census, from which current estimates of the total U.S. population are obtained, unmarried persons attending college away from home are counted as residents of their parents' homes. In the Censuses of Population, such persons are counted as residents of the communities in which they live while attending college. The effect of this difference is to classify a larger number of college-age persons as farm residents in the CPS than would be so classified under decennial census usage.

Persons in institutions, summer camps, motels, and tourist camps, as well as those living in rented places where no land is used for farming, were classified as nonfarm.

In August 1975, the U.S. Department

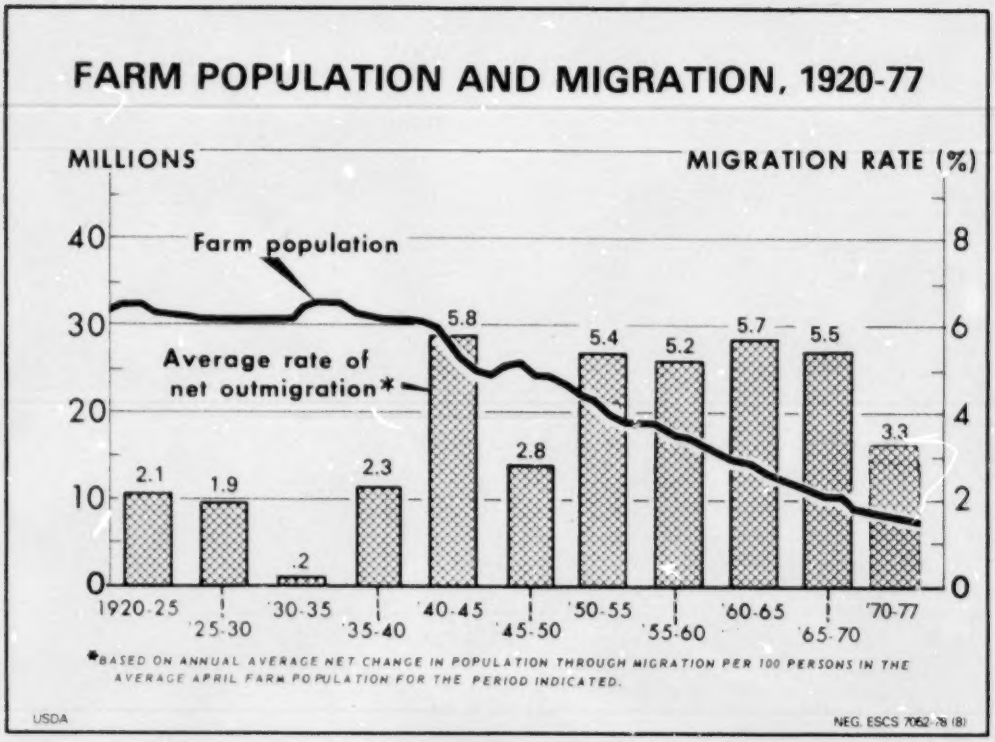

Figure 2

of Agriculture (USDA) and the Bureau of the Census announced a change in the official farm definition. Under the new definition, a farm is identified on the basis of sales alone, and is defined as any place from which $1,000 or more of agricultural products are sold or would normally be sold in the reporting year. However, all of the farm population figures presented in this report are based on the acreage-sales farm definition in use since 1960. Implementation of the 1975 definition is being delayed, since Congress is currently considering further revisions.

April-centered annual averages. Such averages of the total U.S. farm population are computed by using data from the five quarters centered on the April date for which the estimate is being prepared. For example, for April 1977, quarterly estimates for the months of October 1976 and January, April, July, and October 1977 were used with a weight of one-eighth given to each of the two October estimates and a weight of one-fourth to each of the estimates of the other 3 months.

Rounding. Individual figures in this report are rounded to the nearest thousand and have not been adjusted to group totals, which are independently rounded. Percentages are rounded to the nearest tenth of a percent; therefore, percentages in a distribution do not always add to exactly 100 percent.

Sources and limitations. Annual estimates of the total number of people living on U.S. farms are obtained from the CPS. These estimates are based on sample data and are subject to sampling variability.

The standard error is primarily a measure of sampling variability; that is, of the variations occurring by chance because a sample rather than the whole of the population is surveyed. The calculated standard error also partially

measures the effect of response and enumeration errors, but does not measure any systematic biases in the data. The chances are about 68 out of 100 that an estimate from the sample would differ from a complete census figure by less than the standard error. Chances are about 95 out of 100 that the difference would be less than twice the standard error. Tables of standard errors for April-centered annual averages for 1970-77 are presented in the joint annual Census-USDA farm population report for 1977. 6/

Data for geographic areas and for components of farm population change are based on data obtained from the 1977 and earlier June Enumerative Surveys of USDA's Statistical Reporting Service (now a part of the Economics, Statistics, and Cooperatives Service). The 1977 sample for the survey was a probability area sample of the 48 conterminous States, consisting of approximately 17,000 area segments (sampling units). Information was obtained from about 25,000 farm households associated with these sample units.

Since the estimates are based on a sample, they may differ somewhat from figures that would be obtained if a complete census count had been taken. As in any survey work, results are subject to error of response and of reporting as well as to sampling variability.

Area estimates for 1977 are tied to 1970 benchmark figures developed to reflect the 1970 relationship between regional farm population estimates obtained from the Census of Population and the CPS. In addition to being tied to benchmark figures for decennial census years, the area estimates are adjusted to conform to the total farm population estimates obtained annually by the Bureau of the Census.

Earlier comparable reports. Estimates for earlier years on number, migration, and natural increase of farm people were published by USDA in Farm Population Estimates, 1910-70, SB-523, July 1973. Annual estimates from 1971 to date are available in:

(1) Farm Population Estimates for 1971 and 1972 (RDS-1).

(2) Farm Population Estimates for 1973 (ERS-561).

(3) Farm Population Estimates for 1974 (AER-319).

(4) Farm Population Estimates for 1975 (AER-352).

(5) Farm Population Estimates for 1976 (AER-383).

Other related reports. Estimates of the demographic, social, and economic characteristics of the 1977 farm population are presented in the cooperative annual Census-USDA report. 7/

Single free copies of the above reports are available from ESCS Publications, Rm.0054-S, U.S. Department of Agriculture, Washington, D.C. 20250.

6/ See footnote 2.

7/ See footnote 2.

11 * U.S. GOVERNMENT PRINTING OFFICE : 1978 O-261-469/ESCS-21